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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/044,163 03/19/98 SHIMOKAWA

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020457 TM02/0313
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EXAMINER

1 F. II

ART UNIT

PAPER NUMBER

2171
DATE MAILED:

03/13/01

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/044,163

Applicant(s)
Simokawa et al

Examiner
Uyen Le

Group Art Unit
2171



☒ Responsive to communication(s) filed on Jan 4, 2001

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-12, 14, and 16-20 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12, 14, and 16-20 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 4 January 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/044,163 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 14, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallant (US 4,648,036) of record, in view of Yazaki et al (US 5,623,639).

Regarding claim 1, the claimed data structure comprising a plurality of data areas, each of said plurality of data areas being loaded data generated in time series during a certain time merely reads on the fact that a plurality of tables store changeable data in the system of Gallant (see Figures 4-6). Furthermore, it is well known in the art as shown by Yazaki to manage time series data (see the abstract). Since the database of Gallant comprises changeable entries (see column 2, lines 21-24), it would have been obvious to one of ordinary skill in the art to store them as time series in order to allow manipulation using time series as taught by Yazaki. The claimed "the plurality of data areas being managed by time series" merely reads on the fact that data is time-

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stamped in time series. The claimed "bookmark information areas each having a pair of bookmark information indicative of time and state of the data" merely reads on the fact that a code field and key fields are used to identify the state of the data in the data structure of Gallant (see column 2, lines 21-59). The claimed online state is indicated by the code field being set to a first value. The claimed loading state is indicated by the code field being set to a second value. Gallant explicitly shows that the key fields contain relevant search parameters for a given table defined by a user (see column 4, lines 2-6). Furthermore, it is well known in the art to keep track of time-ordered data items as shown by Yazaki. Therefore, it would have been obvious to one of ordinary skill in the art to include in a key field of the data structure taught by Gallant information indicative of a time corresponding to a time series data piece loaded in each table in order to allow searching of time-ordered data in a database.

Claim 4 differs from claim 1 only by reciting data pieces loaded at "predetermined locations" and "predetermined" bookmark information areas. Clearly storing data in a database requires predetermined location for storage. The claimed predetermined bookmark areas merely read on the location of a code and key fields storing status information (See Figure 2).

Claims 2, 5 merely recite the well known fact that no data storage has unlimited space and that bookmark indicators can be read consecutively. Clearly, since data is stored in consecutive tables in a database, the bookmark indicators are also read consecutively (see Figures 2, 4-6).

Regarding claims 3, 6, Gallant disclosed the claimed state transition information when Gallant shows the update, non-update and post-update states. The claimed online state is indicated by the code field being set to a first value. The claimed loading state is indicated by the code field being set to a second value and the claimed empty state is indicated by the code field being set to a third value (see the abstract, column 2, lines 21-59).

Claim 7 corresponds to a method utilizing the data structure recited in claim 1 with the added limitation of providing also a value indicating a state in which data is empty. Therefore, is rejected for the same reasons discussed in claims 1 and 3 above.

Claims 8, 9 merely read on responding to data retrieval request by reading the code field and key field in the method of Gallant and providing the data requested if such data is available.

Claim 10 merely reads on responding to data deletion request by reading the code field and key field in the method taught by Gallant.

Claim 11 adds the limitation of storing data pieces for a predetermined time and adding a bookmark identifying the collection in the storage area. It would have been obvious to one of ordinary skill in the art to do so in order to identify a collection of data by the same bookmark for easy retrieval in the method taught by Gallant.

Regarding claim 12, Gallant discloses a database management method including adding bookmark information indicating state transition when Gallant shows that the code field value is indicative of the state of the data (see column 2, lines 21-59). Gallant explicitly shows that key fields are used to add relevant search parameters (see column

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4, lines 2-6). The claimed start area information having a flag and an address area merely read on key fields taught by Gallant. Furthermore, Yazaki explicitly shows the concept of a time-series database (see the abstract). The claimed "each of said plurality of data areas being loaded with data generated in time series during a certain time, the plurality of data areas being managed by time series" merely reads on the fact that since the database of Gallant comprises changeable entries of the database such as entry, page, record (see column 2, lines 21-23), it would have been obvious to one of ordinary skill in the art to include time stamping changes and loading data areas with data generated in time series in order to facilitate subsequent time series management as taught by Yazaki.

Regarding claim 14, Gallant discloses a database managing method including reading bookmark information and writing bookmark information when Gallant shows that the code field values change according to the state of the data (see the abstract, column 2, lines 21-59). Claim 14, lines 3-9 merely reads on the fact that after deletion, the code field is set to a third value. Lines 10-13 merely reads on the fact that data is loaded to the empty areas detected. The claimed "each of said plurality of data areas being loaded with data generated in time series during a certain time, the plurality of data areas being managed by time series" merely reads on the fact that since the database of Gallant comprises changeable entries of the database such as entry, page, record (see column 2, lines 21-23), it would have been obvious to one of ordinary skill in the art to include time stamping changes and loading data areas with data generated in time series in order to facilitate subsequent time series management as taught by

Yazaki. The claimed "writing bookmark information having bookmark indicative of a time corresponding to a time series data piece for said predetermined time and state transition information indicative of an online state of said time series data piece for said predetermined time in said predetermined bookmark area" merely reads on the fact that the code field is set to a first value indicating that data is available.

Claim 16, 17, 18, 19 are rejected for the same reasons discussed respectively in claims 8, 9, 10, 11 above.

Regarding claim 20, Gallant discloses a database managing system (see the abstract). The claimed processor having a memory for storing data for a certain time merely reads on the fact that the system of Gallant is computerized and stores a changeable database (see Figure 1). Furthermore, Yazaki teaches managing time series data (see the abstract). Clearly, the memory is managed by time series. Since time series would facilitate memory management as shown by Yazaki, it would have been obvious to one of ordinary skill in the art to implement the database of Gallant as a time-series database. The claimed clock for reading times at which data is applied is clearly present in the system of Gallant in order to monitor changeable entries in the database. The claimed database is met by element 130 of Gallant. The claimed bookmark information is met by the code field 220 and key fields 210 shown by Gallant. The claimed online, loading and empty state merely read on the first, second and third value of the code field respectively indicating whether data is available or is being updated or had been deleted.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dehner, Jr. et al (US 4,954,981) teach a method and apparatus for accessing and manipulating time series.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen Le whose telephone number is (703) 305-4134. The examiner can be reached on Monday through Thursday from 7:00am to 5:30pm.

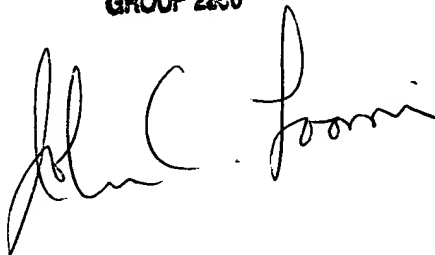
If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703)305-9707.

The fax phone numbers for the organization where this application or proceeding is assigned is 308-9051 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-9000.

UL
March 2, 2001

JOHN C. LOOMIS
PATENT EXAMINER
GROUP 2100

A handwritten signature in cursive script, appearing to read "John C. Loomis", is written over the printed name and title.